

WHAT IS CLAIMED IS:

- 1 1. A fabricating method for an array substrate of a liquid crystal display device, the
2 method comprising:
3 forming a gate line including a gate electrode on a substrate;
4 forming a gate-insulating layer on the substrate, the gate-insulating layer covering the
5 gate line and gate electrode;
6 forming an active layer on the gate-insulating layer;
7 forming a data line, a source electrode and a drain electrode on the active layer;
8 forming a passivation layer on the gate-insulating layer, the passivation layer covering
9 the data line, source electrode and drain electrode;
10 dry-etching a surface of the passivation layer with a gas such that the surface is
11 embossed; and
12 forming a reflective electrode on the embossed surface of the passivation layer such
13 that an exterior surface of the reflective electrode is embossed.
- 1 2. The method of claim 1, wherein the gas used for the dry-etching is a mixture gas of
2 $\text{SF}_6 + \text{O}_2$.
- 1 3. The method of claim 1, wherein the gas used for the dry-etching is a mixture gas of
2 $\text{CF}_4 + \text{O}_2$.
- 1 4. The method of claim 1, wherein the gas used for the dry-etching is O_2 gas.

1 5. The method of claim 1, wherein the passivation layer includes an organic insulating
2 material.

1 6. The method of claim 5, wherein the organic insulating material is benzocyclobutene
2 (BCB).

1 7. The method of claim 1, wherein the reflective electrode is an opaque conductive
2 metal.

1 8. The method of claim 7, wherein the opaque conductive metal is an aluminum based
2 metal.

1 9. The method of claim 1, further including forming a contact hole in the passivation
2 layer prior to forming a reflective electrode on the embossed surface of the passivation layer
3 such that an exterior surface of the reflective electrode is embossed.

1 10. The method of claim 1, further including forming a contact hole in the passivation
2 layer prior to dry-etching the surface of the passivation layer.

1 11. A liquid crystal display device comprising:
2 upper and lower substrates with a liquid crystal layer interposed therebetween;
3 a gate line and a gate electrode on the lower substrate;
4 a gate-insulating layer on the lower substrate, the gate-insulating layer covering the

5 gate line and gate electrode;
6 an active layer on the gate-insulating layer;
7 a source electrode and a drain electrode on the active layer;
8 a data line on the gate-insulating layer;
9 a passivation layer on the data line, source electrode, and drain electrode; and
10 an embossed reflective electrode on the passivation layer.

1 12. The device of claim 11, wherein the passivation layer includes an organic insulating
2 material.

1 13. The device of claim 11, wherein the organic insulating material is benzocyclobutene
2 (BCB).

1 14. The device of claim 11, wherein the reflective electrode is an opaque conductive
2 metal.

1 15. The device of claim 14, wherein the opaque conductive metal is an aluminum based
2 metal.

1 16. A method of fabricating an array substrate for a liquid crystal display device, the
2 method comprising:
3 forming a gate line including a gate electrode on a substrate;
4 forming a first insulating layer on the substrate, the first insulating layer covering the

5 gate line and gate electrode;
6 forming an active layer on the first insulating layer;
7 forming a data line, a source electrode and a drain electrode on the active layer;
8 forming a second insulating layer on the data line, source electrode and drain
9 electrode;
10 forming a first contact hole in the second insulating layer, exposing a first portion of
11 the drain electrode;
12 forming a transparent electrode contacting the drain electrode via the first contact
13 hole;
14 forming a passivation layer on the first insulating layer and transparent electrode;
15 forming a second contact hole in the passivation layer and the second insulating layer,
16 exposing a second portion of the drain electrode;
17 dry-etching a surface of the passivation layer with a gas such that the surface is
18 embossed; and
19 forming a reflective electrode on the embossed surface of the passivation layer such
20 that an exterior surface of the reflective electrode is embossed.

1 17. The method of claim 16, wherein the gas used for the dry-etching is a mixture gas of
2 $\text{SF}_6 + \text{O}_2$.

1 18. The method of claim 16, wherein the gas used for the dry-etching is a mixture gas of
2 $\text{CF}_4 + \text{O}_2$.

- 1 19. The method of claim 16, wherein the gas used for the dry-etching is O₂ gas.
- 1 20. The method of claim 16, wherein the passivation layer includes an organic insulating
2 material.
- 1 21. The method of claim 20, wherein the organic insulating material is benzocyclobutene
2 (BCB).
- 1 22. The method of claim 16, wherein the reflective electrode is an opaque conductive
2 metal.
- 1 23. The method of claim 22, wherein the opaque conductive metal is an aluminum based
2 metal.
- 1 24. A liquid crystal display device comprising:
2 upper and lower substrates with a liquid crystal layer interposed therebetween;
3 a gate line and a gate electrode on the lower substrate;
4 a first insulating layer on the lower substrate, the first insulating layer covering the
5 gate line and gate electrode;
6 an active layer on the gate-insulating layer;
7 a source electrode and a drain electrode on the active layer;
8 a data line on the gate-insulating layer;
9 a second insulating layer on the data line, source electrode and drain electrode;

10 a transparent electrode on the second insulating layer;
11 a passivation layer on the second insulating layer and the transparent electrode; and
12 an embossed reflective electrode on the passivation layer.

1 25. The device of claim 24, wherein the passivation layer includes an organic insulating
2 material.

1 26. The device of claim 24, wherein the organic insulating material is benzocyclobutene
2 (BCB).

1 27. The device of claim 24, wherein the reflective electrode is an opaque conductive
2 metal.

1 28. The device of claim 27, wherein the opaque conductive metal is an aluminum based
2 metal.